

REMARKS

Claims 1 to 6 are under consideration in the application. Claims 1, 2 and 3 are independent claims. Claims 7 to 9 have been withdrawn from consideration due to a restriction requirement.

§103

In the Office Action mailed October 11, 2007, claims 1 to 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over the computer generated English translation of Japan No. 2002-80934 (the “ ‘934 patent”).

This rejection is respectfully traversed.

Rule 132 Declaration

Attached hereto and forming part hereof is a Declaration Under 37 C.F.R. §1.132 executed by Mr. Hidekuni Murakami, a co-inventor of the above-identified patent application, (hereinafter the “Murakami Declaration”).

The Present Invention

The present invention provides a steel sheet for vitreous enameling excellent in workability, aging properties and enameling properties, wherein the steel contains, C: 0.0050% or less, Si: 0.50% or less, Mn: 0.005 - 1.0%, P: $10 \times (B - 11/14 \times N) - 0.10\%$, S: 0.080 or less, Al: 0.050% or less, N: 0.0005 - 0.020%, B: $0.60 \times N - 0.020\%$, O: 0.002 - 0.080%, and the balance being Fe and unavoidable impurities, and the steel sheet further containing simple or compound nitrides having a diameter of 0.02 to 0.50 μm which contain B or Al, and having an average diameter of 0.080 μm or larger, and the proportion of the number of the nitrides of 0.050 μm or smaller in diameter to the total number of nitrides being 10% or less.

The technology disclosed in the ‘934 patent relates a steel sheet for enameling having nonaging properties and excellent in foam and black point resistance without depending on decarburization-denitrifying annealing increasing without containing Nb and Ti, wherein the steel

sheet contains; C: 0.0018% or less, Si: 0.020% or less, Mn: 0.10 - 0.30%; P: 0.010 - 0.035%, S: 0.035% or less, Al: 0.010% or less, N: 0.0008 - 0.0050%, B: 0.0050% or less and more than 0.6 x N, O: 0.005 - 0.050%, and having a diameter of BN of 0.005 - 0.50 μm or an average diameter of composite precipitates containing BN of 0.005 - 0.50 μm of 0.010 μm or more and the ratio of BN or composite precipitates containing BN having a diameter of less than 0.010 μm of 10% or less, and where the steel sheet is produced by a process comprising the steps of heating a slab at 1000 - 1150°C, hot rolling, coiling at 650 - 750°C, cold rolling with the reduction rate of more than 60%, recrystallization annealing and skin-pass rolling with a reduction rate of less than 5%.

The present invention is directed to the use of coarser nitrides than the nitrides of the cited '934 patent. The distribution of the sizes of the nitrides in the present invention is different than the distribution of the sizes of the nitrides in the '934 patent. The present invention is directed to providing large or coarse nitrides.

The distribution of the sizes of nitrides in the present invention is an important factor for improving aging resistance and resistance to bubbles and black spots. Murakami Declaration, ¶ III (b). Specification, page 8, lines 31 to 33. The present invention is direction to providing large nitrides because it is believed that at high temperatures, such as annealing or vitreous enameling baking, fine nitrides are likely to decompose and therefore deteriorate aging and resistance to bubbles and black spots. Murakami Declaration, ¶ III (b). Specification, page 9, lines 4 to 10.

The attached Murakami Declaration is directed to showing that the steel sheet for vitreous enameling of the present invention, as defined in independent claims 1, 2 and 3, has a different nitride size distribution than the nitride size distribution disclosed or suggest in the '934 patent and the reasons therefor.

Table 3 at page 18 of the specification of the present application is not directed to showing improved aging resistance and improved resistance to bubbles and black spots. Table 3

does not address these important factors as they relate to nitride size distribution. Original independent claims 1, 2 and 3 did not contain claim limitations directed to nitride size distribution. Table 3 is directed to a broader invention than amended independent claims 1, 2 and 3 currently under consideration in the present application. The nitride size distribution claim limitations were added to independent claims 1, 2 and 3 by an Amendment Under PCT Article 34 during the international stage of PCT/JP2003/02672.

In view of the attached Murakami Declaration, it is submitted that independent claims 1, 2 and 3, and all claims dependent thereon, are patentable over the '934 patent.

CONCLUSION

It is submitted that in view of the Murakami Declaration and the foregoing remarks, the application is now in condition for allowance. It is therefore respectfully requested that the application be allowed and passed for issue.

Respectfully submitted,

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